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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,064	12/08/2004	Axel Pfeffer	OT-4995	1608

7590 07/06/2007
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EXAMINER

MCCALL, ERIC SCOTT

ART UNIT	PAPER NUMBER
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2855

MAIL DATE	DELIVERY MODE
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07/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/501,064

Applicant(s)

PFEFFER, AXEL

Examiner

Eric S. McCall

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,9-11,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,9-11,14 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

BRAKE LINING MONITORING DEVICE AND METHOD

FINAL OFFICE ACTION

In response to the Applicant's amendment dated April 18, 2007.

CLAIMS

35 U.S.C. § 101

In view of new guidelines set forth to TC 2800 on April 19, 2007, all rejections under 35 U.S.C. 101 as set forth in the previous office action (March 14, 2007) have been withdrawn.

35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 9-11, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Paielli (6,384,721).

With respect to independent claims 1, 9, and 10, Paielli sets forth a method of monitoring functionability of a brake lining, comprising the following steps:

measuring a value (ie. capacitance) that characterizes a dielectric constant of a lining (abstract) wherein the lining (42, brake pad) is provided between a first, pressing braking member (brake caliper) and a second, pressed braking member (48, brake rotor);

comparing the measured value (ie. measured capacitance) with a reference value (ie. acceptable capacitance for a lining) for the lining; and

determining the functionability when the measured value is within a specific tolerance range (col. 3, lines 30+ and col. 4, lines 55+)

wherein, when the brake is actuated, the lining contacts the first pressing braking member (the brake caliper) and the second, pressed braking member (brake rotor).

Further with respect to claim 10, Paielli sets forth at least two conductors (24 & 26) arranged in the lining in a way so that the conductors can be used to perform a capacitance

measurement (col. 2, lines 59-62) and arranged in a plane that is substantially parallel to the braking surface of the lining (the conductors 24 & 26 are “plates” and thus are substantially parallel to the braking surface).

With respect to claim 2, Paielli suggests that the measured value is determined by a static capacitance measurement (via the conductors 24 & 26).

With respect to claim 4, Paielli sets forth at least two conductors (24 & 26) located in the lining material.

With respect to claim 11, Paielli suggests that the brake lining monitoring device comprises a resistance which, in conjunction with the capacitance emitted by the at least two conductors, forms an oscillating circuit (Figs. 8-10).

With respect to claims 14 and 15, Paielli suggests that the lining includes a braking surface, wherein at least one conductor is arranged in the lining, and wherein the at least one conductor is arranged in a plane that is substantially parallel to the braking surface of the brake lining (see conductive “plates” 24 & 26).

Response To Arguments

The Applicant's arguments have been considered but have not been found to be persuasive.

Specifically, the Applicant has argued with respect to amended independent claims 1 and 9 that the lining of brake pad (42) would not be in contact with the pressing member (brake caliper) when the brake is actuated in the applied prior art of Paielli.

The Examiner disagrees. The Applicant's specification and drawings set forth a basic drum-brake set-up. Paielli sets forth both a basic disc-brake set-up and a basic drum-brake set-up. The Applicant's system and that of Paielli operate in the same fashion. Thus, the Examiner is not sure why the Applicant would argue that the lining of the brake pad would not be in contact with the pressing brake member, such as a brake caliper, when the brakes are actuated. The Examiner points out that if no such contact was made, disc-brakes or drum-brakes would not operate, for it is the pressing brake member (ie. a brake caliper or brake shoe) that presses the brake lining of the brake pad into a pressed braking member (ie. a brake rotor or brake drum).

The Examiner points out that the sole purpose of a pressing brake member such as a brake caliper is to press the brake pad (ie. brake lining) against the pressed braking member (brake rotor). Thus, when the brakes are applied in both disc-brake and drum-brake set-ups, the brake lining which is attached to the pressing braking member on one side is pressed against the pressed braking member.

With respect to the Applicant's arguments pertaining to amended independent claim 10, the arguments have been considered but have not been found to be persuasive.

The Applicant argues that the prior art of Paielli fails to teach or suggest at least two conductors that are arranged in a plane that is substantially parallel to the braking surface of the brake lining. Instead the Applicant argues that Fig. 1 of Paielli clearly shows conductors that are substantially perpendicular to the braking surface.

The Examiner disagrees that the conductors are not arranged substantially parallel to the braking surface. Figure 1 of Paielli does show the relied upon "at least two conductors" (24 & 26) as claimed by the Applicant. However, Figure 1 only shows the cross-sectional area of these conductors. These conductors do not just run perpendicular to the braking surface, but they run parallel to the braking surface as well. As evidence, the conductors 24 & 26 are explicitly termed conductive "plates". Thus, there is a 3rd dimension to these conductors that Fig. 1 does not show.

The Examiner further points out that the Examiner's arguments provided on pages 6 and 7 of the previous office action (March 14, 2007) are incorporated herein for reference because the said arguments still very much apply in response to the Applicant's present arguments.

CONCLUSION


THIS ACTION IS MADE FINAL. The Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric S. McCall whose telephone number is (571) 272-2183.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ERIC S. McCALL
PRIMARY EXAMINER

JUNE 28, 2007